



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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DOUGLAS P. SCOTT, DIRECTOR

815-223-1714

June 12, 2009

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Ms. Demaree Collier Remedial Project Manager SR-6J
Remedial Response Unit No. 1
United States Environmental Protection Agency
Region V
77 W. Jackson Blvd.
Chicago, Illinois 60604-3590

Refer to: 0990300031—LaSalle County
Matthiessen and Hegeler Zinc Company Superfund Site
Superfund/Technical Reports

Dear Ms. Collier

The Illinois Environmental Protection Agency (Illinois EPA) has reviewed the Draft Technical Approach Consensus Document Human Health and Ecological Assessment (Report) dated May 14, 2009. The Report was a collaborative effort prepared by Geosyntec of Jacksonville Florida for Carus Chemical and Sultrac Inc. on the behalf of U.S.EPA Region V. Illinois EPA only conditionally approves the Report, please address the following comments:

1. Section 2.1.1.2 entitled, Land and Groundwater use on page 2-4 references, the City of LaSalle's comprehensive water resource management plan and Ordinance 1755 and that a Memorandum of Understanding (MOU) with Illinois EPA exists. Further in this paragraph the Report states, "The MOU places certain obligations on the city so that Ordinance 1755 is acceptable for establishing environmental institutional controls (under Title 35 of *Illinois Administrative Code* 742.320[d] and 742.1015) justifying the elimination of groundwater exposure pathway from consideration under Illinois law. Because a public water main serves the Carus Plant and no water supply wells are currently present on OU1, future groundwater on OU1 is prohibited."

The Illinois EPA denies the elimination of the groundwater pathway pursuant to 35 Illinois Administration Code Part 742.320 based upon the following:

ROCKFORD – 4302 North Main Street, Rockford, IL 61103 – (815) 987-7760 • DES PLAINES – 9511 W. Harrison St., Des Plaines, IL 60016 – (847) 294-4000
ELGIN – 595 South State, Elgin, IL 60123 – (847) 608-3131 • PEORIA – 5415 N. University St., Peoria, IL 61614 – (309) 693-5463
BUREAU OF LAND - PEORIA – 7620 N. University St., Peoria, IL 61614 – (309) 693-5462 • CHAMPAIGN – 2125 South First Street, Champaign, IL 61820 – (217) 278-5800
SPRINGFIELD – 4500 S. Sixth Street Rd., Springfield, IL 62706 – (217) 786-6892 • COLLINSVILLE – 2009 Mall Street, Collinsville, IL 62234 – (618) 346-5120
MARION – 2309 W. Main St., Suite 116, Marion, IL 62959 – (618) 993-7200

- A. As stated in previous letters The Tiered Approach to Corrective Objectives 35 Administrative Code Part 742 is a **To Be Considered (TBC)** and is not an ARAR. Therefore, it is the Illinois EPA that will determine the applicability of a TBC, pursuant to the Illinois Environmental Protection Act [415 ILCS 5/1] et.seq.
 - B. In order to use 35 Ill. Adm. Code 742.320 d (Groundwater Ingestion Exposure Route) requires that all requirements of 742.320 (a-f) be met.
 - C. Local Groundwater Ordinances prohibiting the installation and use of potable water well supplies are not generally available for use as institutional controls in Illinois. They are only available for cleanups performed in accordance with the applicability provisions of 35 Ill. Adm. Code 742.105. Therefore, TACO is not applicable except as a TBC for NPL sites and thus making groundwater ordinances inapplicable as institutional controls on NPL sites.
 - D. The applicant may also need to satisfy 35 Ill. Adm. Code 742.805 (a-d) entitled, Tier 2 Groundwater Remediation Objectives to ensure these requirements to exclude the groundwater pathway are met.
- 2. Under the Uniform Environmental Covenants Act (765 ILCS 122) groundwater ordinances may be used for NPL sites where property use restrictions are required.
 - 3. If ordinances under 35 Ill. Adm. Code Part 742 were available for NPL sites, the City of LaSalle ordinance cited in the Report is probably not applicable to the groundwater plume. Ordinance 1755 was approved (subject to the MOU signed on 2/26/02) and only applies to a very limited area described in Section 2 of the Ordinance. Unless the entire groundwater contamination plume for the entire 160 acre site defined in the NPL listing falls within this legal description of Section 2 the Ordinance as well as the MOU is inapplicable to the M&H site.
 - 4. The Report description of the intended use describes a more general prohibition described in Section 1 of Ordinance 1755 that is based on availability of local public water supply. Section 1 while applicable in LaSalle, Illinois is not applicable and is denied as an institutional control pursuant to 35 Ill. Adm. Code 742.1015(a)(3) which expressly prohibits the use of that type of prohibition as an institutional control.
 - 5. The existence of an approved ordinance and a MOU accompanying the ordinance does not mean that every site within the prohibition may use it as an institutional control. There are several site specific factors, including the existence of existing wells either public or private as well as their setback zones that shall be considered in the vicinity of the plume, shall be evaluated before an ordinance can be approved. Therefore, all institutional controls involving State of Illinois

regulations, procedures or concurrence shall require specific review and approval by the State of Illinois. In addition, such institutional controls shall require a review by the Illinois EPA for approval.

6. Should the use of the City of LaSalle's comprehensive water resource management plan become part of the Risk Assessment that may be incorporated into any part of the Decision making documents, it should be clearly stated which parts are to be incorporated.
7. Section 2.2.1.5 entitled Screening Levels states, "Exceedances of screening levels do not in themselves indicate that an unacceptable risk exists. Rather, the exceedance of a screening level indicates the need for further evaluation in the risk assessment."

The State of Illinois finds this statement as it may apply to actual State of Illinois ARARs unacceptable. Exceedances of a screening level and applicable State of Illinois regulations suggesting that it may not contribute to overall risk where an ARAR is exceeded may not be approved. Exceedances of a screening level will also be regarded as a Contaminant of Concern (COC) requiring evaluation.

8. Page 2-27 in the section entitled Groundwater states, "As described in sections 2.1.1.2 and 2.1.2.2 groundwater is not used at OU1 and OU2 for any purposes. Therefore, consumption of groundwater is an incomplete pathway for current receptors at OU1 and OU2."

Illinois EPA disagree's that groundwater from the site is an incomplete pathway without a full demonstration that all possible media are not affected from groundwater below the site. If contaminated groundwater at the site is contaminating deeper ground water sources or surface water then a complete pathway may be considered to exist.

The use of Ordinance 1755 for the purpose of eliminating the groundwater pathway in this section is denied. See comments above.

In addition, all groundwater shall be regarded as Class I groundwater pursuant to 35 Ill. Adm. Code Part 620.

9. Section 3.1.1 entitled, Problem Formulation identifies OU1 and OU2 areas separately which is fine. However, this section fails to identify expressed concerns of the Illinois EPA regarding OU2 and operations that have occurred since the ceasing of Zinc Smelting of the actual Matthiessen and Hegeler Zinc Company that began in 1858 and ceased operations in 1961. Operations since 1978 possibly have included: plating operations, continuous casting of aluminum, operations related to the rolling mill and other activities at the site. This section of the Report only documents soil contamination at OU2 resulted from historical coal mining and zinc smelting operations. Illinois EPA disagrees with this

determination for OU2 identified as the Rolling Mills portion of the facility. This discrepancy is based upon Violation Notices issued by the Rockford Regional Office of the Illinois EPA. These incidents for which these violation notices were issued may have resulted in releases adding to zinc smelting and coal mining operations.

Comments 10 through 15 are regarding procedures used in collecting samples that have been collected or will be collected in the future regarding asbestos. Illinois EPA Bureau of Air asbestos inspector upon review of the Report consulted with Mr. Jeffery Bratko and Marceillars Rochelle of the Air Enforcement and Compliance Assurance Branch Air and Radiation Division US.EPA Region V.

10. Asbestos cleanup issues should refer to NESHAP as a work practice standard and it does not rely on air sampling because, many years ago, the folks who developed the asbestos NESHAP recognized that air sampling is not always a reliable source of information at demolition and renovation sites, especially when the site is a pile of rubble.

If the site has been sitting for a while, the easily disturbed fibers may have blown away or been washed deeper into the rubble by precipitation. However, when that rubble is disturbed by movement then new material will be exposed and air monitoring may, or may not, detect the fibers that are released.

It would be very hard and potentially unwise to do aggressive air sampling outside in open air as to the potential risk it may cause. By doing aggressive air sampling in an open area they would be taking a potentially greater risk which could disperse large quantities of fibers that cannot be captured and cleaned-up. It may be unwise to do aggressive air sampling in such a situation.

11. Illinois EPA as well as US.EPA is aware and has documented asbestos mixed with the other debris at the site. In our reviewing the Report, *(my review)* will focus on whether or not a cleanup proposal addresses all of the asbestos NESHAP requirements.

Since I believe asbestos from a regulated operation is mixed in the soil then I would follow the asbestos NESHAP guidance that the soil should be cleaned up to background levels of asbestos found in the uncontaminated soil in the vicinity. You may also want to point out the Superfund guidance and note it may require a more rigorous cleanup than is required by the asbestos NESHAP.

During any of the sampling has the person doing the sampling been wearing a personal pump to detect any asbestos in their breathing zone.

12. Regarding the soil sampling, if there is possible vermiculite it needs to be tested using the Carb 435 method. The Carb 435 method is the only method accepted for the testing of vermiculite. Other soil sampling methods should be by core

sampling and TEM results. And again this should be equal to or less than the background soil sample results.

13. Illinois EPA through previously performed inspections inside of the former LaSalle Rolling Mills facility building has made and documented issues regarding the asbestos on the equipment that had been removed during the sale of the material. It had not been removed prior to the removal of equipment so, the possibility exists of friable asbestos throughout the building. In addition, piping at the top of the roof line inside of the building is in bad condition and has been in a deteriorating condition for some time. Semi truck traffic that have been coming in and out of the building with exhaust fumes could have easily disturbed the previously existing conditions thus increasing the potential of a hazard for people in the building. To the knowledge of the Illinois EPA no Remedial Action has been performed on the suspect asbestos containing materials in the former LaSalle Rolling Mills facility main building.
14. Another building to the South of the large warehouse that was formerly used as a laboratory building "science building" containing lab equipment and chemicals. Observations of the building revealed the potential for suspect asbestos containing materials as well as chemical contamination inside the building. The conditions inside the building have been in disturbed condition for some time, which creates a potentially hazardous condition.
15. Observations by Illinois EPA personnel on site visits to former LaSalle Rolling Mills facility have observed what is believed to be the suspect asbestos containing material be referred to as "mag block" throughout the site. This observation was made around the outside of the warehouse building. Mag block that has fallen off of the piping has been observed lying in the debris around the site and over time is probably contained deeper in the debris or has been potentially distributed over a larger area.

In addition, transite, a suspected asbestos containing material has also been observed lying around the outside of the warehouse building. Semi-truck traffic increases the possibility of transite being run over and creating a friable material by crushing it and grinding it into the soil increasing the possibilities of inhalation exposure.

16. Demolition of any buildings on the property are required to complete the Notification of Demolition and Renovation form which shall be post marked or hand delivered at least 10 working days before the start date along with a \$150.00 fee? This notice is required even if asbestos containing materials are not present or contained within the building. This work is regulated under 40 CFR Subpart M – 61.145 (a) (2) (ii).

Comments 17 through 37 were made by the Illinois EPA Toxicology Assessment Unit. Connie Sullinger should be cc on responses to comments from both US.EPA and Geosyntec.

17. Section 2.2; Data Evaluation and COPC Selection: For risk assessment purposes, soil samples are routinely obtained from the depth of 0-6 inches in order to sufficiently characterize current risk to human and ecological receptors. Since samples (other than XRF samples) were not obtained from 0-6 inches, the consultants should indicate how this data gap affects the assessment of risk at this site and how this data gap will be addressed as the process proceeds.
18. Section 2.2; Data Evaluation and COPC Selection: To TAU's knowledge, USEPA does not allow the use of XRF data in the process of quantitatively calculating site-specific risk. TAU has requested clarification from the USEPA Region 5 risk assessor assigned to this site. This clarification must include the specific quality control parameters that need to be met by the metals evaluated.
19. Section 2.2.5.1; Screening Levels: TAU is requesting a list of the specific screening levels used for the evaluation of data at this site.
20. Section 2.2.5.1; Screening Levels: If soil screening values based upon potential migration to groundwater are not used in the screening process, how specifically will the potential for migration to groundwater be evaluated during the RI process?
21. Section 2.2.5.1; Screening Levels; Soil: As previously provided in TAU comments on the screening process, TAU recommends that human health screening benchmarks for soil should be the lowest of:
 - TACO (35 IAC Part 742)-all receptors, all pathways.
 - Regional Screening Levels for Chemical Contaminants at Superfund Sites: (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm)
 - Chemicals-Not-In-TACO Tier I: (<http://www.epa.state.il.us/land/taco/chemicals-not-in-taco-tier-1-tables.html>) -all receptors, all pathways.
23. It should be noted that the Regional Screening Levels do not include screening levels for the construction worker receptor.
24. Section 2.2.5.1; Screening Levels; Surface Water: The screening level for surface water should be the lowest of the values available in the Illinois Water Quality Standards, National Water Quality Standards, and Illinois EPA Water Quality Criteria. The State of Illinois Administrative Code Part 302 shall be used in the evaluation of surface water data.

25. Section 2.2.5.1; Screening Levels; page 2-16: It is stated on page 2-16 that “Polychlorinated biphenyls (PCB) and pesticides are not considered site-related constituents and are not expected to be detected on site.” This statement is contrary to the information provided on page 4 of the OU2 Data Evaluation Summary Report Phase II which states that “Potential polychlorinated biphenyl (PCB) sources occur at OU2, and PCBs were detected in both surface and subsurface soil samples.” Please revise the statement on page 2-16. The statement is also in conflict with previous information submitted to the Illinois EPA in presentations made in on-site meetings held at the facility.
26. Section 2.2.5.2; Background Screening: The Illinois EPA accepts the use of the background inorganic concentrations listed in 35 IAC Part 742 (TACO) in the process of screening sites for determining chemicals of potential concern. Screening using the PNA concentrations listed in TACO is only allowed at those sites that meet the Section 742.200 definition of a “populated area.” Site-specific background concentrations may be determined and used in place of the TACO background soil concentrations or the Illinois EPA stream and lake non-elevated concentrations. To TAU’s knowledge, the concentrations of elements in soil and sediment compiled by the USGS have not been used in the screening process in Illinois. The USGS values may be used in the uncertainty section of the baseline risk assessment.
27. Section 2.2.5.4; Evaluation of Infrequently Detected Constituents: The evaluation of infrequently detected constituents should include an evaluation of potential hot spots. TAU is suggesting that TACO construction worker objectives be used in evaluating a potential “hot spot” by comparing discrete sample results to TACO construction worker objectives.
28. Section 2.3.1.1; Soil; Incidental Ingestion of COPCs in Soil; Page 2-19: On page 2-19, the example noted for number (2) of the RBA hierarchy is “the default medium-specific RBA for soil is 0.60.” TAU believes that this RBA of 0.60 refers to lead specifically, therefore, should be identified as such in the statement.
30. Section 2.3.1.1; Soil; Dermal Contact with COPCs in Soil; Page 2-20: TAU accepts the DAFs used in the Regional Screening Level tables due to the fact that the DAFs used are the ones identified in the 2004 USEPA Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment). TAU does question the use of USEPA Region 3 values for those VOCs and inorganic compounds not specifically addressed by Part E. In Exhibit 3-3 in Part E of RAGs, it is stated that dermal exposure to chemicals lacking DAFs should be evaluated qualitatively in the uncertainty section. Alternately, quantitative evaluation may be conducted if relevant studies are provided to and approved by regional risk assessors. TAU is requesting that the USEPA Region 5 risk assessor provide an indication as to

whether the Region 3 DAFs for those compounds not addressed in Part E have been reviewed and approved by Region 5.

31. Section 2.3.1.1; Soil; Dermal Contact with COPCs in Soil; Page 2-20: The default DAF value of 0.1 should be used for semi-volatiles. Please clarify in the text on page 2-20.
32. Section 2.3.2; Exposure Point Concentrations: Please refer to page 92 of the ProUCL Version 4.0 Technical Guide which states that the minimum data requirement for the calculation of UCL is a data set with 8-10 detected observations not simply 8 samples.
33. Section 2.3.4.4; Current and Future Construction Worker Exposure Factors; Page 2-33: The RME IRS for the construction worker should be 330 mg/day, not 300 mg/day as indicated on page 2-33. Please correct text.
34. Section 2.3.4.4; Current and Future Construction Worker Exposure Factors; Page 2-33: Certain exposure parameters for the construction worker receptor must be revised. When dealing with exposures that occur over a period of less than one year, the Averaging time (AT) should be viewed as the time or days available for exposures to occur during a year's time. Otherwise, an AT value of 365 days will be determined when the true averaging time should be much briefer. In the TACO regulations, the default AT for the construction worker is 0.115 years. This value is determined by assuming that a construction worker has an exposure frequency of 30 days per year (5 days a week for 6 weeks). Since the exposure must be averaged over the total days available for exposure (7 days a week for 6 weeks or 42 days), the AT of 0.115 is determined by dividing 42 days by 365 days per year in order to determine that fraction of the year when exposures actually occur. Therefore, the exposure duration of 1 year and the corresponding AT value for noncarcinogens of 365 days for the construction worker are unacceptable. The assumed exposure frequency in the consensus document is 5 days a week for 13 weeks (65 days); therefore, the number of days available for exposure is 7 days a week for 13 weeks or 91 days. The AT of 0.249 is determined by dividing 91 days by 365 days per year. It should be noted that the AT for noncarcinogens of 9125 days listed in the last bullet on page 2-32 is inconsistent with the AT listed in Table 4.4a.RME (365 days).
35. Section 2.3.4.5; Current and Future Trespasser Exposure Factors; Page 2-36: TAU is requesting further supporting discussion relative to all scenarios where the assumed values for the Fraction Ingested (FI) term varies from the default value of 1.0.
36. Section 3.1.1; Problem Formulation; Page 3-4: Please note that the Illinois EPA has never indicated that ecological screening criteria for potentially contaminated

soil, sediment, or surface water should be determined based upon a hierarchical approach. The Illinois EPA expects that the ecological screening process will utilize the lowest value from among the available screening benchmarks.

37. Section 3.1.2; Screening-Level Exposure Estimates and Risk Calculations; Page 3-6: Please note that PBTs (persistent, bio-accumulative, and toxic compounds) may not be screened out as ecological chemicals of potential concern based upon ecological screening levels for direct contact.

Please provide the Illinois EPA with 3 copies of any future information submitted regarding the above referenced site. Mail two copies to the Springfield Illinois address and another copy to Thomas C. Williams LPG Illinois EPA Project Manager at PO. Box 1515 LaSalle, Illinois 61301-3515. The Illinois EPA requests 14 days notification of all site investigations and remedial activities to coordinate oversight. If you have any questions, please feel free to contact me at the telephone number 815-223-1714 or Terry Ayers at 217-524-3300. Issues regarding asbestos should be referred to Dennis Hancock Illinois EPA BOA asbestos inspector at 815-223-9874

Sincerely



Thomas C. Williams LPG.
National Priorities List Unit
Federal Sites Remediation Section
Bureau of Land

cc: Bureau of Land File
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